



From the INTERNATIONAL SEARCHING AUTHORITY

PCT

INVITATION TO PAY ADDITIONAL FEES

(PCT Article 17(3)(a) and Rule 40.1)

To:

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Date of mailing
(day/month/year)

17/02/2004

Applicant's or agent's file reference

PCT030907

PAYMENT DUE

within 45 ~~days~~ days
from the above date of mailing

International application No.

PCT/JP 03/12706

International filing date
(day/month/year)

02/10/2003

Applicant

AOYAMA SEISAKUSHO CO., LTD.

1. This International Searching Authority

- (i) considers that there are 2 (number of) inventions claimed in the international application covered by the claims indicated ~~below~~ on the extra sheet:

and it considers that the international application does not comply with the requirements of unity of invention (Rules 13.1, 13.2 and 13.3) for the reasons indicated ~~below~~ on the extra sheet:

- (ii) ☒ has carried out a partial international search (see Annex) ☐ will establish the international search report on those parts of the international application which relate to the invention first mentioned in claims Nos.:

1 - 8

- (iii) will establish the international search report on the other parts of the international application only if, and to the extent to which, additional fees are paid

2. The applicant is hereby **invited**, within the time limit indicated above, to pay the amount indicated below:

EUR 945,00 x 1 = EUR 945,00
Fee per additional invention number of additional inventions total amount of additional fees

Or, _____ x _____ = _____

The applicant is informed that, according to Rule 40.2(c), the payment of any additional fee may be made under protest, i.e., a reasoned statement to the effect that the international application complies with the requirement of unity of invention or that the amount of the required additional fee is excessive.

3. ☐ Claim(s) Nos. _____ have been found to be unsearchable under Article 17(2)(b) because of defects under Article 17(2)(a) and therefore have not been included with any invention.

Name and mailing address of the International Searching Authority



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Authorized officer

Nathalie Diebold

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8

A tapping screw with a head and a shaft wherein the shaft portion has:

- a constant diameter portion followed by
 - a portion with diameter being reduced toward the tip and
 - a continuous male thread on the shaft having plural notch portions or cut-outs or recesses in the crest part of the thread profile including a "notch face" a "rising wall" and a "corner portion".
-

2. claims: 9-11

A tapping screw with a head and a shaft wherein the shaft portion has:

- a constant diameter portion followed by
 - a portion with diameter being reduced toward the tip and
 - a continuous male thread on the shaft whereby the shaft has a non-circular shape
-

In other words, claims 1-9 relate to a shaft with circular cross-section with notches cut into the top of the thread profile, whereas claims 9-11 relate to an intact thread profile provide on a shaft with a non-circular cross-section in order to obtain the desired effect.

The common concept linking the independent claims 1 and 9 is the generally well known screw configuration comprising a head, a shank with a through going thread having a constant diameter section followed by a section with reducing diameter.

This concept is not new, see e.g. JP-A-11247817 mentioned in the description or US5772374 of the present applicant, see abstract. Hence it is considered that the independent claims 1 and 9 relate to different inventions as defined above.

The application relates to a plurality of inventions, or groups of inventions, in the sense of Rule 13.1 PCT. They have been divided as defined above. If the applicant pays additional fees for one (or more) not yet searched group(s) of invention(s), then the further search(es) may reveal further prior art that gives evidence of a further lack of unity 'a posteriori' within one (or more) of the not yet searched group(s). In such a case only the first invention in this (each of these) group(s) of inventions, which is considered to lack unity of invention, will be the subject of a search.

No further invitation to pay further additional fees will be issued. This is because Article 17(3)(a) PCT stipulates that the ISA shall establish the International Search Report on those parts of the international application which relate to the invention first mentioned in the claims

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('main invention') and for those parts which relate to inventions in respect of which the additional fees were paid. Neither the PCT nor the PCT guidelines provide a legal basis for further invitations to pay further additional search fees (W17/00, point 11 and W1/97, points 11-16).

**Annex to Form PCT/ISA/206.
COMMUNICATION RELATING TO THE RESULTS
OF THE PARTIAL INTERNATIONAL SEARCH**

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1. The present communication is an Annex to the invitation to pay additional fees (Form PCT/ISA/206). It shows the results of the international search established on the parts of the international application which relate to the invention first mentioned in claims Nos.:
see 'Invitation to pay additional fees'
2. This communication is not the international search report which will be established according to Article 18 and Rule 43.
3. If the applicant does not pay any additional search fees, the information appearing in this communication will be considered as the result of the international search and will be included as such in the international search report.
4. If the applicant pays additional fees, the international search report will contain both the information appearing in this communication and the results of the international search on other parts of the international application for which such fees will have been paid.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 947 715 A (WALTHER GERDA ; WALTHER MIRCO (CA); WALTHER ULI (CA); WALTHER THORSTEN) 6 October 1999 (1999-10-06) figures 1-6 -----	1-4
X	EP 0 433 484 A (HETTICH LUDWIG SCHRAUBENFAB) 26 June 1991 (1991-06-26) the whole document -----	1, 2, 4
A	GB 1 482 624 A (BARNSDALE A) 10 August 1977 (1977-08-10) the whole document -----	1-8
A	DE 33 36 277 A (SIEMENS AG) 30 May 1984 (1984-05-30) the whole document -----	1-8
A	EP 0 697 071 B (HETTICH LUDWIG SCHRAUBENFAB) 5 March 1997 (1997-03-05) figures 1-15 -----	1-8

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Patent Family Annex

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0947715	A	06-10-1999	CA 2234040 A1	03-10-1999
			AT 234432 T	15-03-2003
			CA 2267572 A1	03-10-1999
			CN 1231391 A	13-10-1999
			DE 69905783 D1	17-04-2003
			EP 0947715 A1	06-10-1999
			ES 2190626 T3	01-08-2003
			JP 2000027830 A	25-01-2000
			TW 411383 B	11-11-2000
			US 6152666 A	28-11-2000
EP 0433484	A	26-06-1991	DE 8915011 U1	01-02-1990
			EP 0433484 A1	26-06-1991
GB 1482624	A	10-08-1977	NONE	
DE 3336277	A	30-05-1984	DE 3336277 A1	30-05-1984
EP 0697071	B	21-02-1996	EP 0623759 A1	09-11-1994
			EP 0625400 A1	23-11-1994
			EP 0697071 A1	21-02-1996
			AU 676917 B2	27-03-1997
			AU 6841894 A	21-11-1994
			CA 2160890 A1	10-11-1994
			DE 59401955 D1	10-04-1997
			JP 8509537 T	08-10-1996
			US 5674035 A	07-10-1997
			AT 119248 T	15-03-1995
			AT 149645 T	15-03-1997
			DE 59300099 D1	06-04-1995
			DK 697071 T3	01-09-1997
			WO 9425763 A1	10-11-1994
			ES 2069440 T3	01-05-1995
			ES 2100069 T3	01-06-1997